

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: **Hosur et al.**

Serial No.: **09/224,401**

Filed: **December 31, 1998**

For: **POWER CONTROL WITH SPACE TIME TRANSMIT DIVERSITY**



Docket: **TI-28734**

Examiner: **H. Nguyen**

Art Unit: **2662**

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**APPELLANTS' REPLY BRIEF**

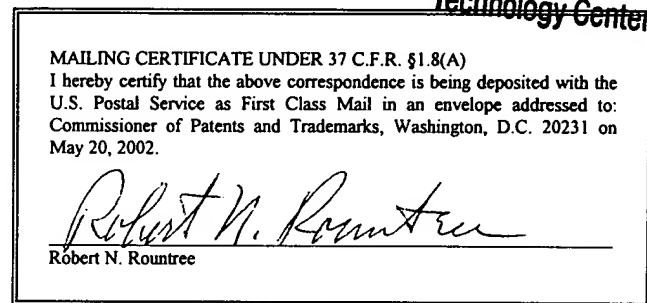
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Dear Sir:

Appellants request entry of the following REPLY BRIEF in response to Examiner's error and a new ground of rejection in EXAMINER'S ANSWER (Paper No. 16) of March 21, 2002. Appellants hereby incorporate by reference their attached Supplemental Appeal Brief filed on January 2, 2002 and Appeal Brief filed on July 30, 2001.

**EXAMINER ERROR**

1. Examiner stated in his Answer that Appellant's Brief did not contain statements of the Real Party in Interest and Related Appeals and Interferences. These statements were included in their Appeal Brief filed on July 30, 2001, and incorporated by reference in their Supplemental Appeal Brief filed on January 2, 2002 as stated on page 1 of the Supplemental Appeal Brief.

Appellants spoke with Examiner Nguyen in a telephone call on May 16, 2002. Appellants informed Examiner Nguyen that the above statements were in the Appellant's Brief. Examiner

Nguyen was not sure whether he still had Appellant's Brief and requested a copy. Appellants sent Examiner Nguyen a copy of Appellant's Brief mailed July 25, 2001, with a copy of the USPTO post card showing receipt on July 30, 2001.

2. Examiner stated at page 10, paragraph 10, of Examiner's Answer that claims 1-28 are rejected under 35 U.S.C. § 103(a). Appellants notified Examiner Nguyen in their telephone conversation on May 16, 2002 that Examiner's Answer failed to state a basis of rejection for claim 9. Since 37 C.F.R. 1.193(b)(1) prohibits a Supplemental Examiner's Answer absent a remand from the Board of Patent Appeals and Interference, claim 9 should be allowed or prosecution reopened.

3. Examiner states that claims 1-28 stand or fall together. Examiner, however, apparently failed to consider Appellant's Brief. Claims 1-28 do not stand or fall together.

Claims 1-8 and 10-16 stand or fall separately as directed to the exemplary embodiment of FIG. 9A and are rejected over Gilhousen et al. in view of Kiyonagi et al. Claims 1-8 and 10-16 recite "a measurement circuit coupled to receive a first input signal from a first antenna of a transmitter and coupled to receive a second input signal from a second antenna of the transmitter, *each of the first and second input signals being transmitted at a first time.*" Thus, claims 1-8 and 10-16 should stand or fall separately because of the particular timing limitation.

Claim 9 stands or falls separately as directed to the exemplary embodiment of FIG. 9A and is rejected over an undisclosed reference. Examiner stated in his rejection on October 11, 2001, that Gilhousen et al. did not disclose the limitations of claim 9 but that they were "described on CDMA-95 standards." Examiner, however, failed to provide a specific cite or other reference. Furthermore, since Examiner admits Gilhousen et al. cannot be a basis for rejection and since Examiner fails to provide any other basis for rejection, claim 9 must stand or fall separately.

Claims 17-21 stand or fall separately as directed to the exemplary embodiment of FIG. 9B and are rejected over Gilhousen et al. in view of Kiyonagi et al. Claims 17-21 recite "a measurement circuit coupled to *receive a first input signal from a first antenna of a transmitter at a*

*first time* and coupled to *receive a second input signal from a second antenna of the transmitter at a third time.*” This limitation is not found in the previous claims. Thus, claims 17-21 should stand or fall separately.

Claims 22-24 stand or fall separately as a method of processing signals for exemplary embodiments of FIG. 9A and FIG. 9C and are rejected over Gilhousen et al. in view of Kiyanagi et al. Claims 22-24 recite “transmitting the at least one control signal at a second time.” This limitation is not found in the previous claims. Thus, claims 22-24 should stand or fall separately.

Claims 25-28 stand separately as a method of processing signals for the exemplary embodiment of FIG. 1 and are rejected over Gilhousen et al. in view of Kiyanagi et al. Claims 25-28 recite “transmitting a plurality of signals to the external source at a respective said transmit power level at a second time from a respective said plurality of antennas.” This limitation is not found in the previous claims. Thus, claims 25-28 should stand or fall separately.

## NEW REJECTION

In the previous rejection of independent claims 1, 17, and 22 on October 11, 2001, at Page 3, Lines 13-18, Examiner stated:

**Gilhousen et al.** does not disclose the first input signal and the second input signal are transmitted from different antennas; and the measurement circuit outputs a signal that corresponds to the two input signals. **Kiyanagi et al.** discloses, in Fig. 1, a space diversity receiver that receives input signals S1, S2 from a first and a second antennas (the first input signal and the second input signal transmitted from different antennas respectively). (emphasis in original).

Examiner admitted that Gilhousen et al. did not disclose input signals transmitted from different antennas. Examiner used Kiyanagi et al. to disclose “the first input signal and the second input signal transmitted from different antennas respectively.” This is a reference to limitations in claims 1-16 “a measurement circuit coupled to receive a first input signal from *a first antenna of a transmitter* and coupled to receive a second input signal from *a second antenna of the transmitter*,” claims 17-21 “a measurement circuit coupled to receive a first input signal from *a first antenna of a*

*transmitter* at a first time and coupled to receive a second input signal from *a second antenna of the transmitter* at a third time;” and claims 22-28 “receiving a plurality of input signals being transmitted at a first time, the plurality of input signals corresponding to a respective plurality of antennas.” (emphasis added).

Regarding claim 1, Examiner states “[t]he applicant does not specifically address whether the first and the second antennas are associated with the transmitter that transmits the signals or associated with the receiver that receives the signals.” (Examiner’s Answer, Page 11, Lines 2-4). Examiner further states “[t]he claim does not specifically state whether the antenna is located at the transmitter or the receiver.” (Examiner’s Answer, Page 12, Lines 5-6). Appellants fail to understand how it could be more clear. Claim 1 recites “a first input signal from a first antenna of a transmitter” and “a second input signal from a second antenna of the transmitter.” Appellants trust the Honorable Board will give the proper weight to this and other disingenuous statements by Examiner.

It seems Examiner recently discovered that Kiyonagi et al. do not disclose input signals transmitted from different antennas. In his new rejection, Examiner now states “*Kiyonagi et al. discloses, in Fig. 1, a space diversity receiver that receives input signals S1, S2 at two spatially separated antennas 20, 21 (the measurement circuit receives two input signals from a first input antenna and the second antenna).*” (emphasis in original)(Examiner’s Answer, Page 4, Lines 18-20). Neither cited reference, taken alone or in combination, teaches or suggests “a first input signal from a first antenna of a transmitter” and “a second input signal from a second antenna of the transmitter,” as required by claims 1-21 or “receiving a plurality of input signals being transmitted at a first time, the plurality of input signals corresponding to a respective plurality of antennas,” as required by claims 22-28. Rather than admit the discrepancy and allow the case, however, Examiner conveniently overlooks the fact that neither cited reference has anything to do with transmit diversity. Examiner even adopts the absurd position that “[t]he first input signal and the second input signal are not necessarily associated with the first antenna and the second antenna located at the transmitter transmitting the two input signals.” (Paper No. 16, Page 10, Line 20 through Page 11, Line 2). Finally, Examiner’s statement “[t]his rejection is set forth in prior Office

action, Paper No. 14,” (Examiner’s Answer, Page 3, Line 8) intentionally misrepresents this new rejection as the previous rejection to the Honorable Board and to Appellants.

**C. No suggestion to combine cited references to produce the present invention**

Appellants’ Supplemental Brief erroneously included claims 25-28 as depending from independent claim 22. (Page 6, Line 23). Independent claim 25 and depending claims 26-28 recite “transmitting a plurality of signals to the external source at a respective said transmit power level at a second time from a respective said plurality of antennas.” Neither Gilhousen et al. nor Kiyanagi et al. teach or suggest transmitting to an external source over such a plurality of antennas. Thus, there is no suggestion in either reference to combine them to produce the present invention.

Examiner states “[t]he motivation for combining the reference is that the reference of Gilhousen et al. refers to fading and the reference of Kiyanagi et al. teaches utilizing space diversity to overcome fading.” It is true that both references are concerned with the problem of fading. However, their solutions to the problem are completely different. Gilhousen et al. devised a power control system for a transmitter. (Abstract). Kiyanagi et al. devised a phase control system for a receiver (Abstract). The two solutions are completely different. There is no suggestion in either reference to motivate one of ordinary skill in the art to combine Gilhousen et al. with Kiyanagi et al. Moreover, even if Gilhousen et al. were combined with Kiyanagi et al., the result would not produce the present invention. There is simply no teaching or suggestion in the combined references of receiver power control of plural transmit antennas.

**OTHER REJECTIONS**

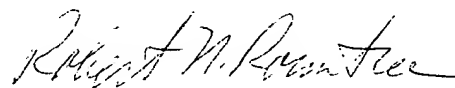
Examiner’s basis for rejecting independent claim 17 and depending claims 81-19 is the same as for claim 1. (Examiner’s Answer, Page 3, Line 19). Claims 17-21 recite “a measurement circuit coupled to receive *a first input signal* from a first antenna of a transmitter *at a first time* and coupled to receive *a second input signal* from a second antenna of the transmitter *at a third time*, the measurement circuit producing *a first output signal corresponding to a magnitude of the first*

*input signal* and producing *a second output signal corresponding to a magnitude of the second input signal*; and a control circuit coupled to receive the first and second output signals and a reference signal, the control circuit arranged to produce *a first control signal at a second time* after the first time in response to a comparison of the first output signal and the reference signal, the control circuit arranged to produce *a second control signal at a fourth time* after the third time in response to a comparison of the second output signal and the reference signal.” (emphasis added). Examiner completely ignores emphasized elements and provides no relevant evidence of their disclosure in the cited references. Thus, independent claim 17 and depending claims 18-21 are patentable under 35 U.S.C. § 103(a).

Examiner’s basis for rejecting independent claim 25 is only directed to “receiving at least a control signal transmitted from an external source [at a first time].” (Examiner’s Answer, Page 5, Lines 7-8). Examiner completely ignores the rest of the claim. Examiner fails to identify steps of “producing a transmit power level of each of a plurality of antennas in response to the control signal” or “transmitting a plurality of signals to the external source at a respective said transmit power level at a second time from a respective said plurality of antennas” in any cited reference. Apart from some evidence that these steps would be found in a combination of cited references, there is no *prima facie* case of obviousness. Thus, independent claim 25 and depending claims 26-28 are patentable under 35 U.S.C. § 103(a).

In view of the above, Appellants respectfully request favorable consideration of the appeal from Final Rejection in the above referenced application and its reversal on claims 1-28.

Respectfully submitted,

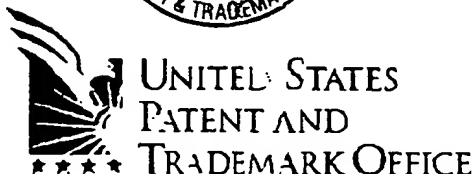


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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of  
 Srinath Hosur et al. Docket Number: TI-28734  
 Serial No.: 09/224,401 Art Unit: 2862  
 Filed: 12/31/1998 Examiner: H. Nguyen  
 For: Power Control with Space Time Transmit Diversity

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TITLE OF INVENTION: Power Control with Space Time Transmit Diversity	Filing Date: 12/31/1998
TITLE NO.: TI-28734	REPORT ACCT NO.: 20-0668
FILED: 01/02/2002	
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